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PATENT
Application # 10/042,143
Attorney Docket # 2000-0672A (1014-200)

AMENDMENTS

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for providing access to a communications medium, the communications medium being suitable for allowing use of a plurality of Home Phoneline Network (HPN) frames, the method comprising steps of:

transmitting the plurality of Home Phoneline Network frames on the communications medium, each pair of Home Phoneline Network frames having timing to allow an Inter-Frame Gap (IFG) having a duration greater than zero microseconds, the IFG comprising a blocking signal adapted to prevent an HPNA v2 (v2 STA) station from recognizing the IFG, the blocking signal not comprising frame content;

transmitting a message from a Media Control Station (MC STA) to at least one selected non-Media Control Station (non-MC STA) when the Home Phoneline Network frames are transmitted; and

receiving a reply message to the transmitted message at the MC STA from a selected non-MC STA when the Home Phoneline Network frames are transmitted.

2. (Cancelled)

3. (Previously Presented) The method according to claim 1, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames includes a Blocking Frame Type field.

4. (Previously Presented) The method according to claim 3, wherein information contained in the Blocking Frame Type field identifies a frame type that is known to the v2 STA.

5. (Previously Presented) The method according to claim 3, wherein information contained in the Blocking Frame Type field identifies a frame type that is unknown to the v2 STA.

6. (Currently Amended) The method according to claim 1, wherein each blocking frame

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comprised by the plurality of Home Phoneline Network frames is assigned a highest HPNA v2 priority available in an HPNA v2 frame, the MC STA adapted to remap priorities of the v2 STA at a link sublayer so that none of the data packets from an upper layer in the v2 STA is mapped to physical priority level 7 of a Media Access Control sublayer.

7. (Previously Presented) The method according to claim 1, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames includes a scrambler initialization field having a fixed length.

8. (Previously Presented) The method according to claim 1, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames includes a scrambler initialization field having a variable length.

9. (Previously Presented) The method according to claim 1, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames includes a payload encoding field.

10. (Currently Amended) The method according to claim 9, wherein each payload encoding field includes information that is known to the v2 STA, each of the plurality of Home Phoneline Network frames comprising a Transmission Duration field in a frame header/preamble.

11. (Previously Presented) The method according to claim 9, wherein each payload encoding field includes information that is unknown to the v2 STA.

12. (Currently Amended) A method for providing access to a communications medium, the communications medium being suitable for allowing use of a plurality of Home Phoneline Network (HPN) frames, each HPN frame being timed to allow a plurality of physical layer priority level slots, the method comprising steps of:

transmitting the plurality of Home Phoneline Network frames on the communications medium, each pair of Home Phoneline Network frames having timing to allow an Inter-Frame Gap

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(IFG) having a duration greater than zero microseconds, the IFG comprising a blocking signal, the blocking signal adapted to prevent an HPNA v2 station (v2 STA) from recognizing the IFG, the blocking signal not comprising frame content;

transmitting a message from a Media Control Station (MC STA) to at least one selected non-Media Control Station (non-MC STA) when the Home Phoneline Network frames are transmitted, the transmitted message being transmitted with a highest physical layer priority level available in an HPNA v2 frame; and

receiving a reply message to the transmitted message at the MC STA from the selected non-MC STA when the Home Phoneline Network frames are transmitted.

13. (Cancelled)

14. (Previously Presented) The method according to claim 12, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames includes a Blocking Frame Type field.

15. (Previously Presented) The method according to claim 14, wherein information contained in the Blocking Frame Type field identifies a frame type that is known to the v2 STA.

16. (Previously Presented) The method according to claim 14, wherein information contained in the Blocking Frame Type field identifies a frame type that is unknown to the v2 STA.

17. (Previously Presented) The method according to claim 12, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames is assigned a highest HPNA v2 priority that is available in the HPNA v2 frame.

18. (Previously Presented) The method according to claim 12, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames includes a scrambler initialization field having a fixed length.

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19. (Previously Presented) The method according to claim 12, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames includes a scrambler initialization field having a variable length.

20. (Previously Presented) The method according to claim 12, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames includes a payload encoding field.

21. (Previously Presented) The method according to claim 20, wherein each payload encoding field includes information that is known to the v2 STA.

22. (Previously Presented) The method according to claim 21, wherein each payload encoding field includes information that is unknown to the v2 STA.

23. (Currently Amended) A communication network, comprising:
a communications medium that is suitable for allowing use of a plurality of Home Phoneline Network (HPN) frames; and

a communications signal in the communications medium having the plurality of Home Phoneline Network frames, each pair of Home Phoneline Network frames having timing to allow an Inter-Frame Gap (IFG) having a duration greater than zero microseconds, the IFG comprising a blocking signal adapted to prevent an HPNA v2 station (v2 STA) from recognizing the an existence of the IFG; the blocking signal not comprising frame content; and

a Media Control Station (MC STA) transmitting a message to at least one selected non-Media Control Station (non-MC STA) during the Home Phoneline Network frames, and receiving a reply message in response to the transmitted message from the non-MC STA during the Home Phoneline Network frames.

24. (Cancelled)

25. (Previously Presented) The communications network according to claim 23, wherein

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each blocking frame comprised by the sequence of Home Phoneline Network frames includes a Blocking Frame Type field, the non-MC STA adapted to not generate priority and Backoff slots in response to a polling frame sequence from the MC STA.

26. (Previously Presented) The communications network according to claim 23, wherein information contained in a Blocking Frame Type field identifies a frame type that is known to the v2 STA.

27. (Previously Presented) The communications network according to claim 23, wherein information contained in a Blocking Frame Type field identifies a frame type that is unknown to the v2 STA.

28. (Previously Presented) The communications network according to claim 23, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames is assigned a highest HPNA priority available in an HPNA v2 frame.

29. (Previously Presented) The communications network according to claim 23, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames includes a scrambler initialization field having a fixed length.

30. (Previously Presented) The communications network according to claim 23, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames includes a scrambler initialization field having a variable length.

31. (Previously Presented) The communications network according to claim 23, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames includes a payload encoding frame.

32. (Previously Presented) The communications network according to claim 31, wherein the payload encoding frame includes information that is known to the v2 STA.

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33. (Previously Presented) The communications network according to claim 31, wherein each payload encoding frame includes information that is unknown to the v2 STA.

34. (Currently Amended) A communication network, comprising:

a communications medium that is suitable for allowing use of a plurality of Home Phoneline Network (HPN) frames, each (HPN) frame being timed to allow a plurality of physical layer priority level slots; and

a communications signal in the communications medium having the plurality of Home Phoneline Network frames, each pair of Home Phoneline Network frames having timing to allow an Inter-Frame Gap (IFG) having a duration greater than zero microseconds, the IFG comprising a blocking signal adapted to prevent an HPNA v2 station (v2 STA) from recognizing the IFG, the blocking signal not comprising frame content, the blocking signal derived from a frame transmitted immediately prior to the IFG; and

a Media Control Station (MC STA) transmitting a message to at least one selected non-Media Control Station (non-MC STA), the transmitted message being transmitted with a highest physical layer priority level available in each HPNA v2 frame and during the Home Phoneline Network frames, the MC STA receiving a reply message in response to the transmitted message from the at least one selected non-MC STA during the Home Phoneline Network frames.

35. (Cancelled)

36. (Currently Amended) The communications network according to claim 34, wherein each blocking frame comprised by the of Home Phoneline Network frames includes a Blocking Frame Type field, the MC STA adapted to introduce a Chaff packet having no destination on the communications medium, the Chaff packet adapted to reserve the communications medium for the MC STA.

37. (Previously Presented) The communications network according to claim 34, wherein information contained in a Blocking Frame Type field identifies a frame type that is known to the v2

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STA, each of the plurality of Home Phoneline Network frames comprising a different End of Frame sequence than v2 STA frames.

38. (Previously Presented) The communications network according to claim 34, wherein information contained in a Blocking Frame Type field identifies a frame type that is unknown to the v2 STA.

39. (Currently Amended) The communications network according to claim 34, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames is assigned a highest HPNA priority that is available in an HPNA v2 frame, each of the MC STA and the non-MC STA having different pre-assigned Contention Resolution Protocol slots that have access priority over the v2 STA.

40. (Previously Presented) The communications network according to claim 34, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames includes a scrambler initialization field having a fixed length.

41. (Previously Presented) The communications network according to claim 34, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames includes a scrambler initialization field having a variable length.

42. (Previously Presented) The communications network according to claim 34, wherein each blocking frame comprised by the plurality of Home Phoneline Network frames includes a payload encoding frame.

43. (Previously Presented) The communications network according to claim 42, wherein each payload encoding frame includes information that is known to the v2 STA.

44. (Previously Presented) The communications network according to claim 42, wherein each payload encoding frame includes information that is unknown to the v2 STA.

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45. (Withdrawn) A Media Controller station (MC STA) for a communications network having a communications medium, the communications medium being suitable for allowing use of a plurality of Home Phoneline Network Association (HPNA) v2 frames, the MC STA comprising:

a QoS (Quality of Service) management entity (QME) receiving at least one end-to-end QoS message characterizing a user application, the at least one end-to-end QoS message including at least one QoS parameter set that is expressed at a layer that is higher than the Media Access Control (MAC) sublayer of an HPNA v2 network and is to be passed down to the MAC sublayer of the MC STA for enabling QoS traffic transport of the application;

an admission control entity (ACE) performing a centralized admission control decision relating to the application based on the at least one end-to-end QoS message characterizing the application; and

the MC STA transmitting a communications signal in the communications medium having a sequence of blocking frames, each blocking frame having timing to allow an Inter-Frame Gap (IFG) having a duration of less than 17 μ sec, said IFG not recognized by an HPNA v2 station (STA) as a duration defined by an HPNA v2 specification for an HPNA IFG, the MC STA further transmitting a message to at least one selected non-MC STA using the communications medium, the transmitted message being transmitted during the blocking frames, and the MC STA receiving a reply message in response to the transmitted message from a non-MC STA during the blocking frames.

46. (Withdrawn) The MC STA according to claim 45, wherein the duration of each IFG between blocking frames is less than about 17 μ sec.

47. (Withdrawn) The MC STA according to claim 45, wherein each blocking frame includes a Blocking Frame Type field.

48. (Withdrawn) The MC STA according to claim 45, wherein information contained in the Blocking Frame Type field identifies a frame type that is known to a v2 STA.

49. (Withdrawn) The MC STA according to claim 45, wherein information contained in

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the Blocking Frame Type field identifies a frame type that is unknown to a v2 STA.

50. (Withdrawn) The MC STA according to claim 45, wherein each blocking frame is assigned a highest HPNA priority that is available in an HPNA v2 frame.

51. (Withdrawn) The MC STA according to claim 45, wherein each blocking frame includes a scrambler initialization field having a fixed length.

52. (Withdrawn) The MC STA according to claim 45, wherein each blocking frame includes a scrambler initialization field having a variable length.

53. (Withdrawn) The MC STA according to claim 45, wherein each blocking frame includes a payload encoding frame.

54. (Withdrawn) The MC STA according to claim 53, wherein each payload encoding frame includes information that is known to a v2 STA.

55. (Withdrawn) The MC STA according to claim 53, wherein each payload encoding frame includes information that is unknown to a v2 STA.

56. (Withdrawn) The MC STA according to claim 45, wherein each HPNA v2 frame is timed to allow a plurality of physical layer priority level slots, and

wherein the transmitted message is transmitted with a highest physical layer priority level available in the HPNA v2 frame and during the blocking frames.